# Section 3 New industrial policy trends and the necessity of multilateral cooperation and rulesmaking

This section will explain the objectives and outlines of industrial policies implemented by China, the United States, Europe and Japan and also provide an overview of the status of industrial policies proactively pursued by other countries. It will reflect on the effects that countries' industrial policies may have on trade and consider the ideal vision of multilateral cooperation and rule-making.

# 1. Proactive pursuit of industrial policies by major countries

Against the backdrop of rising geopolitical risks due to the U.S.-China confrontation, supply chain vulnerabilities concerning goods related to economic security, such as semiconductors and critical minerals, and the progress in countries' efforts to achieve carbon neutrality, major countries, mainly the United States, China, and European countries, are proactively launching policies to strengthen the competitiveness of domestic industries.

Japan is also stepping up efforts to encourage companies to manufacture critical goods, as exemplified by the decision to establish a tax program to promote domestic production in strategic areas, which provides tax breaks regarding EVs, semiconductors and other goods in accordance with the production or sales volume, under the FY2024 tax system reform outline.

# (1) Recent developments related to industrial policies

While major countries are proactively pursuing industrial policies, a severe surplus supply has arisen and concerns about surplus supply risk have been raised as a result of the continued expansion of production capacity due to government subsidies and other assistance provided with no regard for economic rationality in some major industries. This situation, known as the surplus production problem, has become an issue at the WTO and other international forums, and the negative effects on trade caused by the problem have come under severe scrutiny.

In October 2023, the EU started an anti-subsidy investigation regarding battery electric vehicles imported from China. In November 2013, European Commission President Von der Leyen stated that the investigation was launched in response to the growing market distortions due to the aggravation of surplus production caused by direct and indirect subsidies. At a trilateral summit with French President Macron and Chinese President Xi Jinping held in Paris in May 2024, she also stated that "the world cannot absorb China's surplus production."<sup>60</sup>

The United States is also putting increasing pressure on China. When U.S. Treasury Secretary Yellen visited China in April 2024, she announced that the two countries started "exchanging views on policies that support balanced growth in the domestic and global economies" and that the U.S. government will discuss the surplus production problem, among other matters, with the Chinese government under the framework of the Economic Working Group, established by the United Stated and China in 2023.<sup>61</sup> In May 2024, the Biden administration announced that it would increase the tariffs on some products

<sup>&</sup>lt;sup>60</sup> See the website of the European Commission

<sup>(</sup>https://ec.europa.eu/commission/presscorner/detail/en/statement\_24\_2464).

<sup>&</sup>lt;sup>61</sup> See the website of the U.S. Department of Treasury (https://home.treasury.gov/news/press-releases/jy2241).

imported from China based on Section 301<sup>62</sup> of the Trade Act. The tariff rate will be raised to 25% by the end of 2024 for steel and aluminum, to 50% by the end of 2025 for semiconductors, to 100% by the end of 2024 for EVs, to 25% by the end of 2024 for lithium ion batteries used in EVs, to 25% by the end of 2026 for natural graphite and permanent magnets, and to 50% by the end of 2024 for solar cells. In a speech he made on the day of that announcement, President Biden stated: "China heavily subsidized all these products, pushing Chinese companies to produce far more than the rest of the world can absorb. And then dumping the excess products onto the market at unfairly low prices, driving other manufacturers around the world out of business."<sup>63</sup>

A communique issued at the G7 Finance Ministers and Central Bank Governors Meeting, held in Italy from May 23 to 25, 2024, stated as follows: "We also reiterate our strong commitment to a free, fair, and rules-based multilateral system. Building on the legacy of the Japanese G7 Presidency, we will advance our cooperation to enhance global economic resilience and economic security and protect our economies from systemic shocks and vulnerabilities. To this end, we will work to make our supply chains more resilient, reliable, diversified, and sustainable, and to respond to harmful practices, while safeguarding critical and emerging technologies. We will consider, when necessary, appropriate measures to promote de-risking and diversification of supply with partners within and beyond the G7. We will enhance cooperation to address non-market policies and practices and distortive policies including those leading to overcapacity through a wide range of policy tools and rules to ensure a global level playing field. While reaffirming our interest in a balanced and reciprocal collaboration, we express concerns about China's comprehensive use of non-market policies and practices that undermines our workers, industries, and economic resilience. We will continue to monitor the potential negative impacts of overcapacity and will consider taking steps to ensure a level playing field, in line with World Trade Organization (WTO) principles. In addition, we encourage efforts from relevant International Organizations (IOs) to improve the quality and availability of data on industrial policy and non-market practices as well as monitoring tools in this area. We support work, in collaboration with other relevant tracks, to assess the macroeconomic impact of subsidies and other industrial and trade policy measures globally, based on comparable information; and to promote a dialogue with third countries on issues related to industrial policies, economic fragmentation, market concentration risks and overcapacity."64

# (2) Developments in China

In a Government Work Report at the second session of the 14th National People's Congress in March 2024, Chinese Premier Li Qiang cited 10 major challenges, including modernizing the industrial system, implementing a strategy to invigorate China through science and education, expanding domestic demand, and pursuing higher-standard opening up. Under the 14th Five-Year Plan (2021-2025), announced in

<sup>&</sup>lt;sup>62</sup> Section 301 of the Trade Act empowers the U.S. Trade Representative to conduct investigations related to (i) violations of WTO and other trade agreements and (ii) unfair, unreasonable or discriminatory measures and to implement sanctions, such as tariff increases when violations of the agreements or such measures by foreign governments have been recognized.

<sup>&</sup>lt;sup>63</sup> See the website of the White House (https://www.whitehouse.gov/briefing-room/speechesremarks/2024/05/14/remarks-by-president-biden-remarks-by-president-biden-on-his-actions-to-protectamerican-workers-and-businesses-from-chinas-unfair-trade-practices/).

<sup>&</sup>lt;sup>64</sup> Extracted from the website of the Ministry of Finance (https://www.mof.go.jp/policy/international\_policy/convention/g7/index.htm).

2021, China set forth a dual circulation policy, which seeks to attract foreign investments and technologies by means of the attractiveness of its huge domestic market while maintaining the policy of opening up to the outside world (international circulation) and expanding domestic demand (great domestic circulation). The policy indicated in the 2024 Government Work Report is consistent with the dual circulation policy. Regarding modernizing the industrial system, which was at the top of the list of the major tasks, the report cited the promotion of optimization and sophistication of industrial chains and supply chains, the development of emerging and future industries, and the promotion of digital economy as concrete initiatives.

Next, we provide an overview of how much subsidy China is providing to which industries while citing the analysis shown in the White Paper on International Economy and Trade 2022. Figure II-1-3-1 shows the amounts of subsidies recorded in the financial statements of companies listed on Chinese securities exchanges in the 10 priority sectors designated under the Made in China 2025 initiative.



Source: White Paper on International Economy and Trade 2022.

Made in China 2025 is an industrial policy initiative announced by the Chinese government in 2015. It aims to increase the domestic production ratio in 10 priority sectors with a view to making China a global manufacturing powerhouse. According to Figure II-1-3-1, in 2020, the new generation information technology industry, including the semiconductor sector, received the largest amount of subsidies, followed by the new materials industry, and the energy-efficient, new-energy vehicle (e.g., EV) industry. Here, we will provide an overview of the subsidies provided by the government of China to the semiconductor and the new energy vehicle sectors.

#### (i) China Integrated Circuit Industry Investment Fund

Under Made in China 2025, the government of China has upheld the goal of the domestic selfsufficiency rate of semiconductors to 75% by 2030. In 2014, it established the China Integrated Circuit Industry Investment Fund (worth 139 billion yuan) and in 2019, it implemented the second round of fund-raising (worth 204 billion yuan).<sup>65</sup> In addition, in August 2020, it announced support measures for integrated circuit makers that meet certain criteria, including an exemption from corporate income tax for 10 years from the first year of profitability.

Moreover, according to a media report, the government of China is preparing to solicit investment for the third round of fund-raising for the China Integrated Circuit Industry Investment Fund. The size of the third round is estimated to be 300 billion yuan, larger than the size of the first round in 2014 and the second round in 2019.<sup>66</sup> The media report indicates that the government of China is likely to continue expanding investment in the semiconductor industry in the future.

### (ii) Tax exemption for vehicle purchase

Support measures for EVs are also on an expansion trend. According to data compiled by Wind, a Chinese information provider, and a survey by Nikkei Asia, among the more than 5,000 listed companies in mainland China, five of the top 10 companies in terms of the amount of subsidies received in the first half of 2023 were local manufacturers of EVs or EV batteries.<sup>67</sup>

In September 2023, the government of China announced the Work Plan For Stable Growth Of The Automobile Industry (2023-2024), which provides for the strengthening of measures to support consumption, including the reduction of or exemption from the vehicle purchase tax, implementation of export promotion measures, development of recharging infrastructure, and securing of the stability and facility of auto industry supply chains. The government of China has designated battery electric vehicles (BEVs), plug-in hybrid vehicles (PHEVs), and fuel cell vehicles (FCVs) as new-energy vehicles (NEVs) and is strengthening support for those types of vehicles. According to the Work Plan, regarding new-energy vehicles, the annual sales target for 2023 was set at around 9 million units (up around 30% from the previous year).<sup>68</sup>

Regarding the reduction of or exemption from the vehicle purchase tax, in June 2023, the government of China announced the extension and revision of the measure, which had continued since 2014. As a result, for new-energy vehicles purchased between January 1, 2024, and December 31, 2025, buyers will be exempted from a vehicle purchase tax of up to 30,000 yuan per vehicle. For new-energy vehicles purchased between 31, 2027, buyers will be eligible for a 50% reduction of the vehicle purchase tax worth up to 15,000 yuan per vehicle.<sup>69</sup>

<sup>&</sup>lt;sup>65</sup> Ministry of Economy, Trade and Industry, "Policy for Securing Stable Supply of Semiconductors" (https://www.meti.go.jp/policy/economy/economic\_security/semicon/torikumihousin\_semicon.pdf).

<sup>&</sup>lt;sup>66</sup> Reuters, September 5, 2023 (https://jp.reuters.com/markets/japan/GWB7WLKPXBO3PA6DADI7IX7RRI-2023-09-05/).

<sup>&</sup>lt;sup>67</sup> Nikkei Asia, September 21, 2023 (https://asia.nikkei.com/Spotlight/Electric-cars-in-China/China-gives-EV-sector-billions-of-yuan-in-subsidies).

<sup>&</sup>lt;sup>68</sup> See the website of the Ministry of Industry and Information Technology of the People's Republic of China

<sup>(</sup>https://wap.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2023/art\_345e17e8729443eb8be3ecac76765874.html).

<sup>&</sup>lt;sup>69</sup> See the website of JETRO (https://www.jetro.go.jp/biznews/2023/06/47d33451a8a22678.html).

#### (3) Developments in the United States

In April 2023, in a speech at the Brookings Institution, Jake Sullivan, Assistant to the U.S. President for National Security Affairs (National Security Advisor), announced a new industrial and innovation strategy called a new Washington consensus.<sup>70</sup> This strategy systematically explains the domestic and foreign policy goals that the Biden administration emphasizes, including the restoration of the middle class, creation of jobs, response to climate change, and competition with China.

Sullivan pointed out four challenges faced by the United States before the inauguration of the Biden administration and proposed policy solutions in five areas. First of all, the need for a modern industrial strategy was emphasized (Table II-1-3-2).



Source: The U.S. White House website.

Sullivan said that a modern industrial strategy is deploying targeted public investments in "specific sectors that are foundational to economic growth, strategic from a national security perspective, and where private industry on its own isn't poised to make the investments needed to secure our national ambitions." He expressed the Biden administration's intention to steadily implement the Infrastructure Investment and Jobs Act, the Inflation Reduction Act of 2022, and the CHIPS and Science Act, which represent the Biden administration's legislative achievements.

#### (i) Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act, enacted in November 2021, is a bipartisan law that provides for expenditure worth a total of around 1 trillion dollars (including 550 billion dollars in new expenditure). President Biden described the scale of the expenditure as "the largest investment in infrastructure since President Eisenhower's Interstate Highway System."<sup>71</sup>

While the Infrastructure Investment and Jobs Act focuses mainly on the repair of the aging transportation infrastructure (e.g., roads, bridges, railroads, ports, and airports) across the United States,

<sup>&</sup>lt;sup>70</sup> See the website of the White House (https://www.whitehouse.gov/briefing-room/speechesremarks/2023/04/27/remarks-by-national-security-advisor-jake-sullivan-on-renewing-americaneconomic-leadership-at-the-brookings-institution/).

<sup>&</sup>lt;sup>71</sup> See the website of the White House (https://www.whitehouse.gov/briefing-room/speechesremarks/2023/02/07/remarks-of-president-joe-biden-state-of-the-union-address-as-prepared-fordelivery/).

it also provides for targeted investments in the development of infrastructure facilities necessary for the dissemination of technologies related to clean energy, including investments in the introduction of zeroemission vehicles in public transport systems, development of EV recharging facilities, development of power transmission grids for the dissemination of clean electricity, and investment in clean hydrogen hubs.<sup>72</sup> The law also provides for the promotion of domestic procurements from the viewpoints of promoting manufacturing industries and creating jobs. The Build America Buy America Act, which was enacted as part of the Infrastructure Investment and Jobs Act, makes it mandatory that all steel, industrial products, and construction materials used in infrastructure plans of the federal government are manufactured in the United States. In August 2023, the final regulation that prescribes the details was announced by the administration.<sup>73</sup>

In November 2023, two years after the enactment of the Infrastructure Investment and Jobs Act, the White House announced the outcomes of the law. According to the announcement, the number of employees in the construction industry has increased by 670,000 people (a monthly average of 20,000 people) since President Biden took office (January 2021), and in October 2023, the number rose to the highest level since record-keeping started in 1939. In particular, the White House emphasized that this law is contributing to job growth by citing an increase of 38,300 employees in the highway, street, and bridge construction sectors since President Biden took office, including 37,600 employees hired since the enactment of the law.<sup>74</sup> Based on the law, the U.S. government aims to build infrastructure for long-term growth by developing infrastructure facilities, including ones related to clean energy, by promoting the domestic construction and manufacturing industries, and by increasing jobs in those industries.

#### (ii) Inflation Reduction Act of 2022

In August 2022, the Inflation Reduction Act, which focuses mainly on climate change-related measures, healthcare and welfare services, and tax revenue increases, was enacted. This law, with investments totaling around 370 billion dollars in climate change-related measures, aims to accelerate private-sector investments in the clean energy sector by reducing the cost of clean energy through tax credits on the supply side (e.g., tax credits for private-sector companies) and on the demand side (e.g., tax credits for consumers) and also strengthen critical supply chains.<sup>75</sup>

Support on the supply side is provided mainly in the form of tax credits. The Inflation Reduction Act promotes investments across the entire product lifecycle by supporting initial investments through investment tax credits and by helping to cover running costs through production tax credits granted in accordance with the production or sales volume. Investment tax credits include tax credits for investments in renewal energy business, re-equipment or expansion of existing production and recycling facilities for clean energy equipment and clean vehicles (e.g., fuel cell cars and EVs), or establishment

<sup>&</sup>lt;sup>72</sup> See the website of the White House (https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf).

<sup>&</sup>lt;sup>73</sup> See the website of the White House (https://www.whitehouse.gov/omb/briefingroom/2023/08/14/biden-harris-administration-releases-final-guidance-to-bolster-american-made-goodsin-federal-infrastructure-projects/).

<sup>&</sup>lt;sup>74</sup> See the website of the White House (https://www.whitehouse.gov/briefing-room/blog/2023/11/15/job-gains-in-construction-after-two-years-of-the-bipartisan-infrastructure-law/).

<sup>&</sup>lt;sup>75</sup> See the website of the White House (https://www.whitehouse.gov/cleanenergy/inflation-reduction-act-guidebook/).

of new such facilities. Production tax credits include tax credits granted in accordance with the volume of renewable energy power generation and tax credits applicable to domestic production and sales of qualified components (components of photovoltaic and wind power generation equipment, inverters, battery components, and critical minerals), and tax credits for the production of clean hydrogen. Regarding some tax credits, including those related to renewable energy, preferential measures concerning the domestic procurement of materials are available. Applicants may be eligible to receive an additional tax credit of up to 10% if they meet a domestic content requirement concerning steel and some other components.

Support on the demand side includes tax credits for the purchase of EVs and other clean vehicles (Hereinafter "EV tax credits") and tax credits for housing renovations intended to improve energy efficiency, and tax credits for the purchase of clean energy equipment for residential use.

Regarding the abovementioned EV tax credits, consumers are eligible for a tax credit of up to 7,500 dollars per vehicle when they purchase a qualified vehicle. The maximum tax credit is applicable only to vehicles that meet the following three requirements; that the final assembly of the vehicles is conducted in North America; that a threshold percentage of battery components are manufactured or assembled in North America; and that the vehicles contain a threshold percentage of critical minerals extracted or processed in the United States or in a country with which the United States has a free trade agreement, or recycled in North America (Table II-1-3-3).

Requirements		Values of tax credit		
Battery components (positive electrode members, negative electrode members, cells, modules, etc.)	[ii] A threshold percentage of battery components should be <u>manufactured or</u> <u>assembled in "North America."</u>	3,750 dollars		Total
Critical minerals (cobalt, lithium, nickel, graphite, etc.)	[iii] The vehicle should contain a threshold percentage of critical minerals extracted or processed in the "United States or in a country with which the United States has a free trade agreement," or recycled in "North America."	3,750 dollars		deduction of 7,500 dollars

#### Table II-1-3-3. Requirements for EV tax credits

Note: Vehicles equipped with components extracted or processed by foreign companies of concern are excluded.

Source: U.S. Inflation Reduction Act.

Those strict requirements concerning the location of production and the procurement source have drawn protest from several allied countries. European Commission President Von der Leyen, in a speech in December 2022, criticized that "there is a risk that the IRA can lead to unfair competition, could close markets, and fragment … critical supply chains" and argued that it is necessary for the United States and Europe to cooperate closely in strengthening clean energy industry infrastructure.<sup>76</sup> Meanwhile, the EU and the Republic of Korea (ROK) called on the United States to improve the treatment of EU and

<sup>&</sup>lt;sup>76</sup> See the website of the European Commission (https://ec.europa.eu/commission/presscorner/detail/en/speech\_22\_7487).

ROK products, for example by submitting government letters of opinion regarding the EV tax credits to the U.S. Department of Treasury in November 2022.<sup>77</sup> Japan also submitted a government letter of opinion to the effect that the Inflation Reduction Act is inconsistent with the overall strategy of creating resilient supply chains under cooperation with like-minded countries. Later, in March 2023, Japan and the United States signed the Agreement between the Government of Japan and the Government of the United States on Strengthening Critical Minerals Supply Chains (hereinafter the "Japan-U.S. Critical Minerals Agreement"). This agreement strengthens Japan-U.S. cooperation with respect to five types of critical minerals indispensable to the production of EV batteries in terms of trade, the environment, and labor in the flow of supply chains, from extraction to processing. Based on the agreement, the U.S. Department of Treasury designated Japan as a country that has signed an FTA with the United States as defined under the Inflation Reduction Act in a guidance published in March 2023. As a result, critical minerals processed in Japan and used in EV batteries meet the requirement for containing a threshold percentage of critical minerals extracted or processed in the United States or in a country with which the United States has a free trade agreement, or recycled in North America.

In addition, regarding the EV tax credits, it is stipulated that vehicles using components or critical materials supplied from foreign entities of concern be excluded from the scope of support. Specifically, vehicles using battery components manufactured or assembled by foreign entities of concern are excluded. Vehicles equipped with batteries using critical materials extracted, processed, or recycled by foreign entities of concern are also excluded. Under the Inflation Reduction Act, foreign entities of concern include companies put on the Specially Designated Nationals and Blocked Persons list (SDN List) and entities that are owned or controlled by or are subject to the jurisdictions or directions of the governments of China, Russia, North Korea, or Iran.

### (iii) CHIPS and Science Act

In August 2022, the CHIPS and Science Act, which centers on support for the production of semiconductors and budgets related to science and technology, was enacted. The expenditure size of the semiconductor production support portion of the law is around 52.7 billion dollars, of which funds allocated to a subsidy fund for investments in equipment related to semiconductors account for around 39 billion dollars and funds allocated to an R&D fund account for 11 billion dollars. The U.S. Department of Commerce has set the goals of creating at least two large-scale clusters of advanced logic chip factories in the United States and increasing the production capacity of current and mature-node chips by 2030. In February 2023, the acceptance of applications for financial assistance for the production of advanced, current, and mature-node chips (including the back-end process) started.<sup>78</sup> As a result of the enactment of the law, capital investment related to semiconductors in the United States has been robust. According to the U.S. Semiconductor Industry Association (SIA), until now, 82 semiconductor ecosystem projects (e.g., establishment of new semiconductor-manufacturing facilities

 $(https://www.meti.go.jp/policy/mono_info_service/joho/conference/semiconductors\_and\_digital.pdf).$ 

<sup>&</sup>lt;sup>77</sup> See the website of JETRO (https://www.jetro.go.jp/biznews/2022/11/62ef774d6cdb4401.html).

<sup>&</sup>lt;sup>78</sup> See Ministry of Economy, Trade and Industry (2023), "Strategy for Semiconductors and the Digital Industry"

and expansion of existing facilities) have been announced, the total amount of private-sector investments has come to 317 billion dollars, and 45,000 new jobs have been created across the United States.<sup>79</sup>

The CHIPS and Science Act also contains a national security guardrail provision. This provision prohibits subsidy recipients from expanding semiconductor-manufacturing capacity in countries of concern (e.g., China, Russia, North Korea, and Iran) and from conducting joint research with foreign entities of concern. Recipients that have violated the provision are required to return the subsidies received. In September 2023, the U.S. Department of Commerce announced the final rule implementing the national security guardrails, which prescribes the details of the expansion guardrail and the technology guardrail<sup>80</sup> (Table II-1-3-4).

#### Table II-1-3-4. National security guardrail provisions contained in the CHIPS and Science Act



Source: The U.S. National Institute of Standards and Technology website.

Under the guardrail provision, the U.S. government is strengthening the resilience of global supply chains not only by preventing the leakage of semiconductors and relevant technologies important for national security reasons to countries of concern but also by cooperating with like-minded countries in semiconductor policy. For example, the Ministry of Economy, Trade and Industry and the U.S. Department of Commerce affirmed cooperation in developing a more robust semiconductor ecosystem at a meeting of the Japan-U.S. Commercial and Industrial Partnership (JUCIP) in May 2023. In order to promote closer cooperation between the two countries in working out a roadmap concerning technology development and worker training under the Japan-U.S. joint task force, the Ministry of Economy, Trade and Industry and the U.S.

<sup>&</sup>lt;sup>79</sup> See the website of the Semiconductor Industry Association (SIA) (as of March 20, 2024; https://www.semiconductors.org/the-chips-act-has-already-sparked-200-billion-in-private-investmentsfor-u-s-semiconductor-production/).

<sup>&</sup>lt;sup>80</sup> See the website of the National Institute of Standards and Technology (https://www.nist.gov/system/files/documents/2023/09/22/09.22.2023%20-%20External%20Deck%20-%20Guardrails%20Final%20Rule.pdf).

Semiconductor Technology Center (NSTC), which has been established in the United States under the CHIPS and Science Act, and the Leading-edge Semiconductor Technology Center (LSTC) of Japan.<sup>81</sup>

#### (4) Developments in Europe

In December 2019, the European Commission announced the European Green Deal, a growth strategy aiming to achieve the goal of reducing net greenhouse gas emissions to zero (net zero emissions) by 2050. European Commission President Von der Leyen said at a press conference that "the European Green Deal is on the one hand about cutting emissions, but on the other hand it is about creating jobs and boosting innovation,"82 calling for reconciling decarbonization with economic growth. In January 2023, in a speech at the World Economic Forum Annual Meeting (hereinafter the "Davos Meeting"), the European Commission President announced the Green Deal Industrial Plan. The plan aims to strengthen the competitiveness of net-zero technologies and products and accelerate the transition to climate neutrality. On the other hand, the plan is regarded as being intended to counter Chinese government subsidies and massive industrial subsidies in like-minded countries, including the U.S. Inflation Reduction Act. In her speech at the Davos meeting, the European Commission President expressed her appreciation for the expansion of investments in clean technology by countries such as Japan, India, the United Kingdom, Canada and the United States as "good news for the planet." On the other hand, she pointed out that the design of the Inflation Reduction Act raised a number of concerns in terms of the design of some incentives and stated that "we should ensure that our respective incentive programs are fair and mutually reinforcing."83

Below, we will explain the outline of major industrial policies adopted by the EU and member countries, focusing mainly on the Green Deal Industrial Plan that was announced by the European Commission.

### (i) Green Deal Industrial Plan

In February 2023, the European Commission published a policy document describing the details of the Green Deal Industrial Plan. As mentioned earlier, the plan aims to develop an environment conducive to the expansion of production capacity of net-zero technologies and products that are necessary for achieving Europe's climate change-related goals and uses the existing Recovery and Resilience Facility (including 225 billion euros in unused loans and 20 billion euros in new grants). As shown in Table II-1-3-5, the plan is comprised of four pillars: "predictable and simplified regulatory environment," "faster access to sufficient funding," "skills," and "open trade for resilient supply chains"<sup>84</sup> (Table II-1-3-5).

<sup>&</sup>lt;sup>81</sup> A press release published by Ministry of Economy, Trade and Industry on May 27, 2023 (https://www.meti.go.jp/english/press/2023/0527 001.html).

<sup>&</sup>lt;sup>82</sup> Extracted from the website of the European Commission (https://ec.europa.eu/commission/presscorner/detail/fr/speech 19 6749).

 <sup>&</sup>lt;sup>83</sup> See the website of the European Commission (https://ec.europa.eu/commission/presscorner/detail/en/speech 23 232).

 <sup>&</sup>lt;sup>84</sup> See the website of the European Commission (https://ec.europa.eu/commission/presscorner/detail/en/IP 23 510).

Items	Measures	Outlines
Predictable and	Bill for the Net-Zero	•Speeding up and simplifying procedures for approving projects for manufacturing
simplified regulatory	Industry Act	net-zero technologies
environment		●Setting the 2030 target for production capacity of net-zero technologies
		Introducing items for assessing sustainability and circularity in public procurement
		•Assessing the possibility to establish regulatory sandboxes to allow for rapid
		experimentation to test new technologies
	Bill for the Critical Raw	•Supporting diversifying procurement sources and recycling raw materials to secure
	Materials Act	the supply of critical raw materials
	Securing stable and	•Securing access to inexpensive renewable energy through a reform of the electricity
	inexpensive energy supply	market
		●Applying the Ecodesign for Sustainable Products Regulation to a broader range of
		products and expanding the range of sustainability requirements
		•Making industries and technologies contributing to net-zero emissions visible (e.g., a
		unified energy label for heat pumps)
Faster access to	Easing the rules on state aid	•Partially revising the current measures to ease the rules on state aid and then
sufficient funding		extending the measures until the end of 2025
		•Allowing member countries to provide support to companies' production activities
		involving net-zero technologies and critical raw materials with some limits of certain
		ratios
		●As an exception where there is the risk of investments related to such production
		activities being transferred out of the EU, allowing member countries to further raise
		the ratio of state aid and to provide aid similar in value to the one that companies
		would be able to receive in non-EU areas to which the activities may be transferred
	Support by EU funding	• Taking advantage of the Innovation Fund based on the European Union Emission
		Trading Systems (ETS) revenues (at the scale of EUR 40 billion for 10 years) to
		support the production of renewable hydrogen
		•Considering the new competitive bidding mechanism for scaling up manufacturing of
Shille	The Europeen Veen of	components for solar and wind energy, batteries and electrolyzers
JAH18	Skills 2023	Ureating engineers and skilled personnel in the field of clean technology
Open trade for	511115 2025	•Securing raw materials and components through concluding trade agreements, etc.
resilient supply chains		• Working with like-minded partners to establish a Critical Raw Materials Club
		• Supporting industries under the Clean Tech/Net-zero Industrial Partnerships
		• Making use of trade defense instruments, including the Foreign Subsidies
		Regulation to address unfair trade practices by third countries

Table II-1-3-5. Outline of the Green Deal Industrial Plan

Source: The European Committee website.

First, we will explain the outline of the first pillar, "predictable and simplified regulatory environment." In March 2023, the European Commission announced the Net-Zero Industry Act and the Critical Raw Materials Act.

The Net-Zero Industry Act aims to increase production capacity regarding net-zero technologies in the EU area by developing a regulatory environment and realizing a faster permitting process. This act, on which a provisional political agreement was reached between the EU Council and the European Parliament in February 2024, is scheduled to move on to an official adoption process going forward. Under the provisional political agreement, among the net-zero technologies designated as "net-zero technology manufacturing projects," which are eligible for assistance, such as fast-track permit procedures, are: photovoltaic and solar heat power generation technologies, onshore and offshore renewable energy technologies, battery/storage technologies, heat pump/thermal heat technologies, hydrogen technologies, including electrolyzers and fuel cells, sustainable biogas/biomethane technologies, CCS technology, and grid technology. The EU aims to increase production capacity regarding net-zero technologies in the EU area to 40% of the annual deployment needs by 2030. The Net-Zero Industry Act also prescribes the requirements concerning public procurement. Specifically, the act provides for the introduction of "contribution to sustainability and resilience" as one of the evaluation

criteria for selecting the winning bidder. The environmental sustainability contribution will be a mandatory minimum requirement, while the resilience contribution will be applied if there is a third-country dependence of more than 50% for a specific strategic net-zero technology (or for its components).<sup>85</sup>

The Critical Raw Materials Act aims to ensure a secure and sustainable supply of critical raw materials. The EU, which depends on imports from China for the supply of many critical raw materials, is trying to diversify supply chains and mitigate risks quickly. This act updates the existing list of critical raw materials and selects materials that are crucial to technologies important for Europe's green and digital ambitions and for defense and space applications and that are subject to potential supply risks in the future, as strategic raw materials (SRMs). Regarding SRMs, in order to secure production capacity in the EU area and diversify supply sources by 2030, the act has set the goal of domestically extracting at least 10% of the EU's annual consumption, domestically processing at least 40% of the EU's annual consumption, and domestically recycling at least 25%<sup>86</sup> of the EU's annual consumption. Moreover, strategic projects recognized as being able to contribute to the stable supply of SRMs based on the Critical Raw Materials Act will be eligible for shorter permitting timeframes and receive support in terms of finance because of their expected benefits for public interests.<sup>87</sup> Regarding the Critical Raw Materials Act, as in the case of Net-Zero Industry Act, a provisional political agreement was reached between the EU Council and the European Parliament in November 2023, and the act is scheduled to move on to an official adoption process.

Next, with respect to faster access to finance, we will provide an outline on the easing of the rules on state aid. In March 2023, the European Commission adopted the Temporary Crisis and Transition Framework, which eases the EU rules on state aid, as a temporary measure to be effective until the end of 2025. In principle, the EU prohibits the provision of state aid to specific companies by member countries because state aid may unfairly distort the environment of competition between member countries.<sup>88</sup> However, the adoption of this framework makes it possible for member countries to provide support for companies' production activities related to net-zero technologies and critical raw materials. Moreover, when there is the risk of investments related to such production activities being transferred out of the EU, member countries will be allowed to further raise the ratio of state aid and provide aid similar in value to the aid that companies would be able to receive in non-EU areas to which the activities may be transferred.<sup>89</sup> In other words, if they meet the conditions prescribed under the framework,

<sup>&</sup>lt;sup>85</sup> See the website of the Council of the European Union (https://www.consilium.europa.eu/en/press/pressreleases/2024/02/06/net-zero-industry-act-council-and-parliament-strike-a-deal-to-boost-eu-s-greenindustry/).

<sup>&</sup>lt;sup>86</sup> Under the European Commission's proposal, the ratio was 15%, but under the provisional agreement reached between the EU Council and the European Parliament in November 2023, the ratio was revised to 25%.

 <sup>&</sup>lt;sup>87</sup> See the website of the European Commission (https://ec.europa.eu/commission/presscorner/detail/en/ip\_23\_1661).
 <sup>88</sup> Extracted from the website of IETRO

 <sup>&</sup>lt;sup>88</sup> Extracted from the website of JETRO (https://www.jetro.go.jp/biznews/2023/03/9715e56c1143f6ca.html).
 <sup>89</sup> See the website of the European Commission

<sup>(</sup>https://ec.europa.eu/commission/presscorner/detail/en/ip\_23\_1563).

member countries will be able to provide incentives similar to the ones available under the U.S. Inflation Reduction Act.

Finally, we will mention trade and resilient supply chains. In a policy document published in March 2023, the European Commission announced that it will establish a Critical Raw Materials Club in order to connect consumer countries and resource-producing countries and promote a secure and sustainable supply of critical raw materials. Through this initiative, the EU, together with partners, will promote the "reliable, commercially based, transparent and environmentally friendly supply of CRMs."<sup>90</sup> The draft initiative calls for cooperation with like-minded countries in promoting labor rights and socially responsible practices in supply chains and the promotion of a circular and sustainable economy that works across borders.

#### (ii) European Chips Act

In February 2022, the European Commission announced the European Chips Act, which aims to strengthen the semiconductor chip ecosystem in the EU, and put it into force in September 2023. The European Chips Act calls for increasing the EU's global market share in the semiconductor sector from the current 10% to 20% or higher by 2030 through a total of 43 billion euros' worth of public and private investments in the semiconductor industry in the EU.<sup>91</sup>

In addition to promoting investment in research and development and innovation by the EU and member countries, the European Chips Act grants preferential measures, such as fast screening for the plans, construction and operation of facilities recognized as "first-of-a-kind" semiconductor-manufacturing in the EU. Member countries and the European Commission will develop a coordination mechanism to facilitate collaboration in monitoring the supply of semiconductors and responding to crises, and they will be empowered to order specific production facilities in the EU to increase semiconductor production and prioritize supply within the EU in crisis times.

#### (iii) EV subsidy programs implemented by member countries

Among the EU member countries, Germany and France, whose auto industry is prosperous, has introduced subsidies for EV purchase.

In 2016, the federal government of Germany introduced an environmental bonus program (Umweltbonus), which was intended to promote the purchase of EVs to replace conventional vehicles. This program, whereby the federal government and automakers jointly provided grants to individuals and companies that purchased EVs, was ended in December 2023 because it became difficult to secure necessary funds.

In September 2023, the government of France reformed the EV subsidy program, limiting the scope of EVs eligible for grants to models that were awarded 60 points or higher in terms of the environmental score, calculated on the basis of the volume of CO2 emissions during the EV manufacturing and

<sup>&</sup>lt;sup>90</sup> European Commission (2023), "COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS A secure and sustainable supply of critical raw materials in support of the twin transition."

<sup>&</sup>lt;sup>91</sup> See the website of the European Commission (https://www.consilium.europa.eu/en/press/press-releases/2023/07/25/chips-act-council-gives-its-final-approval/).

transportation processes.<sup>92</sup> Regarding the volume of CO2 emissions during the EV manufacturing process that is necessary for the calculation of the environmental score, the benchmark has been set on a country-by-country, region-by-region basis. Consumers who purchase EVs that meet the environmental score criterion are eligible to receive a grant of up to 5,000 euros (up to 7,000 euros in the case of low-income earners).

#### (5) Developments in Japan

# (i) Tax concessions for promoting domestic production in strategic areas

Under the FY2024 tax system reform outline, Japan decided to establish tax concessions for promoting domestic production in strategic areas. This program grants corporate tax credits proportionate to the volume of production or sales to projects in strategic sectors whose total project expenditure is large and whose cost at the production stage is particularly high. Specifically, the items eligible for the program include EVs, green steel, green chemicals, sustainable aviation fuels (SAF), and semiconductors. The value of tax credit per unit varies from item to item. For example, the value of tax credit per unit is 400,000 yen for EVs (Table II-1-3-6). Regarding the green transformation (GX) sector, one of the strategic sectors eligible for this tax credit program, funds acquired through GX Economy Transition Bonds will be used.<sup>93</sup>

-	0	•	0
	Products		Values of tax credit
Electronic	EVs and FCVs		400,000 yen per unit
vehicles, etc.	EVs and PHEVs in light vehicles		200,000 yen per unit
Green steel			20,000 yen per ton
Green chemicals			50,000 yen per ton
Sustainable aviation fuels (SAF)			30 yen per litter
Semiconductors	Microcomputers	Equivalent to 28-45 nm	16,000 yen per unit
		Equivalent to 45-65 nm	13,000 yen per unit
		Equivalent to 65-90 nm	11,000 yen per unit
		90 nm or more	7,000 yen per unit
	Analog semiconductors (including power semiconductors)	Power semiconductors (Si)	6,000 yen per unit
		Power semiconductors (SiC, GaN)	29,000 yen per unit
		Image sensors	18,000 yen per unit
		Others	4,000 yen per unit

 Table II-1-3-6. Value of tax credit per unit of target products under the tax concessions

 for promoting domestic production in strategic areas

Note: In the second half of the given fiscal year when competitiveness is expected to be strengthened, the values of tax credit will gradually be reduced (75% in the eighth year from the start of production, 50% in the ninth year, and 25% in the tenth year). For semiconductors, the table shows the values of tax credit per unit in terms of 200 mm wafers.

Source: METI.

<sup>&</sup>lt;sup>92</sup> See the website of JETRO (https://www.jetro.go.jp/biznews/2023/09/eae49de44139c4f2.html).

<sup>&</sup>lt;sup>93</sup> Ministry of Economy, Trade and Industry, "FY2024 Tax System Revisions Related to Economy, Trade and Industry" (https://www.meti.go.jp/main/zeisei/zeisei\_fy2024/zeisei\_k/pdf/zeiseikaisei.pdf).

#### (ii) Measures to support semiconductor production

In December 2021, the Act of Partial Revision of the Act on Promotion of Developing/Supplying and Introducing Systems Making Use of Specified Advanced Information Communication Technologies and the Act on the New Energy and Industrial Technology Development Organization, which prescribes measures to promote investments in production facilities for high-performance semiconductors, was enacted, and the law was put into force in March 2022.<sup>94</sup>

Semiconductor-manufacturing companies that seek support based on this law should submit to the Minister of Economy, Trade and Industry a "plan for the development of a specific semiconductor production facility, etc." and apply for approval. If the plan is approved as being able to contribute to securing the stable production of high-performance semiconductors, the applicant companies become eligible to receive grants through the New Energy and Industrial Technology Development Organization (NEDO). The scope of semiconductors for which an application may be filed and a plan may be approved include logic chips and memory chips (Table II-1-3-7). Regarding either type of semiconductor, submitted plans are required to provide for the continuation of production for 10 years or longer and the implementation of steps to increase production when the supply-demand balance has become tight.

# Table II-1-3-7. Plans falling under the scope of filing an application and receiving an approval for measures to support semiconductor production

Types of semiconductors	Major conditions
Semiconductors for calculation (logic chips)	Applicant businesses should develop facilities for producing semiconductors
	with a metal pitch of 100 nm or less,* and produce such semiconductors.
	*Note: These semiconductors must have a metal pitch of 100 nm or less, rather than a process technology
	(technology node).
	- Such businesses should produce semiconductors using a gate insulating
	film with a relative permittivity of over 7.
	- Such businesses should have the technical level to produce FinFETs.
Semiconductors for memory (memory chips)	●Applicant businesses should develop facilities for producing semiconductors
	with a memory cell area of 1,370 nm <sup>2</sup> or less and produce such semiconductors.
	- Such businesses should have the technical level to achieve EUV lithography.
	●Such businesses should develop facilities for producing semiconductors with
	160 or more layers of memory cells and produce such semiconductors.

Source: METI.

#### (iii) Systems for ensuring stable supply of critical products

The Economic Security Promotion Act, enacted in May 2022, provides for systems for ensuring stable supply of critical products (Chapter 2 of the act). This is intended to designate critical products that are essential to the survival of the people or on which the people's daily activity and economic activity widely depend as specified critical products and to increase the resilience of supply chains of

<sup>&</sup>lt;sup>94</sup> Ministry of Economy, Trade and Industry, "Act on Promotion of Development, Supply, and Introduction of Specified Advanced Information and Communication Technology Utilization Systems (Related to Specified Semiconductor Production Facilities, etc.)" (https://www.meti.go.jp/policy/mono info service/joho/laws/semiconductor.html).

specified critical products by supporting private-sector business operators that strive to secure a stable supply of those products.<sup>95</sup>

In December 2022, 11 items of products—antibacterial preparations, fertilizer, permanent magnets, machine tools/industrial robots, aircraft parts, semiconductors, storage batteries, cloud programs, natural gas, critical minerals, and vessel parts, were designated as specified critical products under a Cabinet order. In February 2024, advanced electronic components (capacitors and high-frequency filters) were designated as new items of critical products under a Cabinet order, while uranium was added to the scope of critical minerals, an existing item of critical products.

When private-sector business operators seek support under this law, they must formulate a plan for activities to secure a stable supply of specified critical products and submit it to the minister in charge of relevant products and apply for approval. If their plans are approved, the business operators become eligible to receive subsidies through stable supply support corporations, etc. and stable supply support independent administrative agencies or receive loans from designated financial institutions using long-term, low-interest funds in order to cover the financial needs of those activities. The subsidy rate varies from project to project. For example, the subsidy for capital investment and technology development related to semiconductors is equivalent to one-third of the investment amount and the development cost, respectively, and the subsidy for capital investment amount and to a half of the development cost, respectively, while the subsidy related to critical minerals is equivalent to a half of the necessary cost.<sup>96</sup>

# 2. Necessity of multilateral cooperation and rule-making related to industrial policies

#### (1) Effects of industrial subsidies on trade

As countries are proactively pursuing industrial policies, we will consider, under simple economic assumptions, how bilateral trade and international prices may be affected when major countries engage in industrial subsidy competition on such a large scale as to have an impact on the market.

Let us assume a case where Country A and Country B, both of which are influential, respectively provide industrial subsidies concerning Goods C in a perfectly competitive market. It is assumed that Countries A and B have an influence over international market prices in a state of free trade and that the international price of Goods C changes in accordance with these two countries' production activities. It is also assumed that the demand curve of Goods C shifts downward to the right, while the supply curve shifts upward to the right.

If the demand and supply curves in Countries A and B have the same shape with respect to Goods C, demand and supply match under the same international price. As a result, even in a state of free trade, trade between Countries A and B does not arise (Figure II-1-3-8).

<sup>&</sup>lt;sup>95</sup> Cabinet Office, "Systems for Ensuring Stable Supply of Critical Products" (https://www.cao.go.jp/keizai\_anzen\_hosho/supply\_chain.html).

<sup>&</sup>lt;sup>96</sup> Ministry of Economy, Trade and Industry, "Economic Security Policy" (https://www.meti.go.jp/policy/economy/economic\_security/index.html).



Source: METI.

Here, let us assume that Country B has provided domestic companies manufacturing goods C with an industrial subsidy in the form of compensation for the cost per unit of production. This leads to an increase in the production capacity of Country B (the supply curve shifts rightward) and growth in the supply of Goods C in the international market, and as a result, the international price drops from P to P\*. Consequently, under international price P\*, excess demand arises in Country A and excess supply arises in Country B, resulting in exports of Goods C from Country B to Country A (Figure II-1-3-9).

# Figure II-1-3-9. Changes in international prices and trade volumes in the case where Country B provides domestic companies with an industrial subsidy



Source: METI.

We will consider a case where Country A has provided domestic companies manufacturing Goods C with an industrial subsidy in the form of compensation for the cost per unit of production under these conditions. Because of the industrial subsidy, the production capacity of Country A increases, causing the international price to fall to P\*\*. As a result, once again, each of Countries A and B returns to a state of matched demand and supply in their domestic markets (Figure II-1-3-10).





Source: METI.

As explained above, when major countries with an influence on international market prices engage in industry subsidy competition, international prices fall due to an increase in production capacity. If either of the two countries provides an industrial subsidy and the other responds with its own subsidy, international prices fall due to the expansion of supply capacity. The provision of an industrial subsidy involves fiscal expenditure, which means that companies or the people bear the financial burden.

However, in the case of industrial subsidies provided for the purpose of diversifying supply sources or correcting external diseconomy, including maintaining or strengthening supply chains and realizing a carbon-neutral society, it may be possible to reach a consensus with other countries. If some form of agreement has been reached on those industrial subsidies in advance between the countries concerned, concerns that the subsidies may develop into trade disputes can presumably be reduced.

On the other hand, if a subsidy creates an uneven playing field in which a country that does not give consideration to sustainability supplies unfairly low-priced products, that situation should be corrected. If the situation depicted in Figure II-1-3-9 has been created by the supply of unfairly low-priced products by Country B, it is presumably possible to secure a level playing field without causing a fall in trade prices by providing demand-side incentives, for example (Figure II-1-3-11).



# Figure II-1-3-11. Economic approaches to securing a level playing field (pictures for illustrative purpose)

Source: METI.

#### (2) Necessity of multilateral cooperation and rule-making

As mentioned earlier, industrial subsidy competition between major countries could affect bilateral trade and international prices. However, because of the need to respond to climate change and other social challenges that cannot be resolved by private-sector companies alone and to secure critical supply chains due to growing geopolitical risks, awareness of the importance of industrial subsidies provided by governments is increasing, so the trend of increasing emphasis on industrial policies is expected to grow further in the future around the world.

Under these international circumstances, we must pay attention to the fact that some countries are providing huge amounts of state aid and pursuing non-market policies and practices in terms of government procurement and standard-setting. Those policies enable companies in some particular countries to sweep domestic and foreign markets and increase their global influence by suppling unfairly low-priced products, and as a result, other countries will be forced to depend excessively on those particular countries. Consequently, the countries that have thus increased their influence may become able to weaponize economic dependencies. If countries introduce industrial policies intended to protect domestic industries in response to that situation, industrial subsidy competition could undermine the stable trade order.

To avoid a situation like that, it is important to maintain the rules-based, free and fair trade and investment regime. Industrial policies implemented by countries must not be of a trade-distorting nature, so it is necessary to secure a level playing field under the WTO rules and other international rules. Based on the awareness that it is necessary to share concerns about the negative effects of non-market industrial policies on trade with a broad array of countries and engage in multilateral activities, discussions are underway at various international forums, including the G7, the OECD, the WTO, and the trilateral partnership between Japan, the United States, and the EU, on how to secure a level playing field. [For the details of discussions held at the various forums, see Part III, Chapter 1]

By implementing demand-side measures using resourceful incentives as well as by providing supply-side support in terms of capital investment, research and development, and critical mineral development, we may be able to help secure a level playing in order to counter unfairly low-priced products. From that viewpoint, the government of Japan aims to secure a level playing field by evaluating the requirements concerning non-price factors, such as the principles of sustainability and reliability, and initiatives based on those principles, including decarbonization, stable supply, and cybersecurity, in terms of demand-side support (e.g., subsidies).

At the same time, in order to reduce excessive dependence on some particular countries or to avert a negative cycle of protectionism, it is essential to further promote international cooperation. In recent years, in order to increase the resilience of supply chains, the government of Japan has signed international agreements, such as the Japan-U.S. Critical Minerals Agreement, which was mentioned in Paragraph 1 of this section, and the IPEF Supply Chain Agreement.<sup>97</sup> As mentioned in Sections 1 and 5 of this chapter, economic security, the environment, and human rights have become a focus of interest around the world. Those issues, known as "non-trade concerns," have come to be incorporated into governments' policies in recent years. Going forward, it is necessary for Japan to exercise leadership in discussions on promoting international coordination of industrial policies, mainly with respect to strategic goods, so that it can work with the United States, Europe, and other like-minded countries to create a virtuous circle of supply capacity expansion and demand creation based on the standards for evaluating application qualifications in terms of the abovementioned criteria items, including sustainability and reliability. With the United States, Japan is already holding discussions on such policy coordination through the Japan-U.S. Commercial and Industrial Partnership (JUCIP) Ministerial Meeting, held in April 2024, and a policy dialogue meeting to maximize synergies between the U.S. Inflation Reduction Act and Japan's GX Promotion Strategy. With the European Commission, Japan held such discussions through the Transparent, Resilient and Sustainable Supply Chains Initiative, which was launched at the Japan-EU High Level Economic Dialogue, held in May 2024.

In the future, it is desirable to broaden the circle of cooperation by holding such discussions under international frameworks, such as AZEC, and on policies regarding the Global South. Japan aims to maintain the stable trade order amid the severe international circumstances while developing a level playing field in Global South countries by promoting policy coordination with those countries through various forms of policy dialogue.

<sup>&</sup>lt;sup>97</sup> A press release published by Ministry of Economy, Trade and Industry on February 1, 2024 (https://www.meti.go.jp/english/press/2024/0201\_001.html).